

#6 OIPE

## RAW SEQUENCE LISTING

DATE: 08/21/2001

PATENT APPLICATION: US/09/823,847

TIME: 11:56:27

Input Set : A:\SCRIP1220-1.ST25.txt

Output Set: N:\CRF3\08162001\I823847.raw

ENTERED

p. 5

2 <110> APPLICANT: THE SCRIPPS RESEARCH INSTITUTE  
 3 SIMS, Peter  
 4 SILVERMAN, Robert  
 5 WIEDMER, Therese  
 7 <120> TITLE OF INVENTION: PHOSPHOLIPID SCRAMBLASES AND METHODS OF USE THEREOF  
 9 <130> FILE REFERENCE: SCRIP1220-1  
 11 <140> CURRENT APPLICATION NUMBER: US 09/823,847  
 12 <141> CURRENT FILING DATE: 2001-03-30  
 14 <150> PRIOR APPLICATION NUMBER: US 60/193,939  
 15 <151> PRIOR FILING DATE: 2000-03-31  
 17 <160> NUMBER OF SEQ ID NOS: 45  
 19 <170> SOFTWARE: PatentIn version 3.0  
 21 <210> SEQ ID NO: 1  
 22 <211> LENGTH: 2076  
 23 <212> TYPE: DNA  
 24 <213> ORGANISM: Homo sapiens  
 26 <400> SEQUENCE: 1

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29	cgaaccagg	agccgcgggt	gttggcgcaa	aggttactcc	cagacccttt	tccggctgac	120
31	ttctgagaag	gttgcgcagc	agctgtgccc	gacagtctag	aggcgagaa	gaggaagcca	180
33	tcgcctggcc	ccggctctct	ggacctgtgc	tcgctcgga	gcggaaacag	cggcagccag	240
35	agaactgttt	taatcatgga	caaacaaac	tcacagatga	atgcttctca	cccggaaaca	300
37	aacttgccag	ttgggtatcc	tcctcagtat	ccaccgacag	cattccaagg	acctccagga	360
39	tatagtggct	accctgggcc	ccaggtcagc	tacccacccc	caccagccgg	ccattcaggt	420
41	cctggcccag	ctggctttcc	tgtcccaaat	cagccagtgt	ataatcagcc	agtatataat	480
43	cagccagttg	gagctgcagg	ggtaccatgg	atgccagcgc	cacagcctcc	attaaactgt	540
45	ccacctggat	tagaatattt	aagtcagata	gatcagatac	tgattcatca	gcaaattgaa	600
47	cttctggaag	ttttaacagg	ttttgaaact	aataacaaat	atgaaattaa	gaacagcttt	660
49	ggacagaggg	tttactttgc	agcgggaagt	actgattgct	gtacccgaaa	ttgctgtggg	720
51	ccatctagac	cttttacctt	gaggattatt	gataatatgg	gtcaagaagt	cataactctg	780
53	gagagaccac	taagatgtag	cagctgttgt	tgtccctgct	gccttcagga	gatagaaatc	840
55	caagctcctc	ctggtgtacc	aataggttat	gttattcaga	cttggcacc	atgtctacca	900
57	aagtttacaa	ttcaaaatga	gaaaagagag	gatgtactaa	aaataagtgg	tccatgtgtt	960
59	gtgtgcagct	gttgtggaga	tggtgatttt	gagattaaat	ctcttgatga	acagtgtgtg	1020
61	gttggcaaaa	tttccaagca	ctggactgga	attttgagag	aggcatttac	agacgtgat	1080
63	aactttggaa	tccagttccc	tttagacctt	gatgttaaaa	tgaaagctgt	aatgattggt	1140
65	gcctgtttcc	tcattgacct	catgtttttt	gaaagcactg	gcagccagga	acaaaaatca	1200
67	ggagtgtggt	agtggacttag	tgaaagtctc	ctcaggaaat	ctgaagtctg	tattattgatt	1260
69	gagactatct	aaactcatac	ctgtatgaat	taagctgtaa	ggcctgtagc	tctggttgta	1320
71	tactttttgct	tttcaaatta	tagtttatct	tctgtataac	tgatttataa	aggtttttgt	1380
73	acatttttta	atactcattg	tcaatttgag	aaaaaggaca	tatgagtttt	tgcattttatt	1440
75	aatgaaactt	cotttgaaaa	actgctttga	attatgatct	ctgattcatt	gtccatttta	1500
77	ctaccaaata	ttaactaagg	cottattaat	ttttatataa	attatatctt	gtccatttaa	1560
79	atctagttac	aattttattc	atgcataaga	gctaattgta	ttttgcaaat	gccatatatt	1620
81	caaaaagct	caaagataat	tttctttact	attatgttca	aataatattc	aatatgcata	1680
83	ttatctttaa	aaagttaa	gtttttttta	tcttcaagaa	atcatgctac	acttaacttc	1740
85	tcctagaagc	taatctatac	cataatattt	tcatattcac	aagatattaa	attaccaatt	1800

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87 ttcaaattat tgtagtaaa gaacaaaatg attctctccc aaagaaagac acattttaaa 1860
89 tactccttca ctctaaaact ctggtattat aacttttgaa agttaatatt tctacatgaa 1920
91 atgttttagct cttacactct atccttcccta gaaaatggta attgagatta ctcagatatt 1980
93 aattaaatac aatatcatat atatattcac agagtataaa cctaaataat gatctattag 2040
95 attcaaatat ttgaaataaa aacttgattt ttttgt 2076
98 <210> SEQ ID NO: 2
99 <211> LENGTH: 318
100 <212> TYPE: PRT
101 <213> ORGANISM: Homo sapiens
103 <400> SEQUENCE: 2
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106 1 5 10 15
108 Leu Pro Val Gly Tyr Pro Pro Gln Tyr Pro Pro Thr Ala Phe Gln Gly
109 20 25 30
111 Pro Pro Gly Tyr Ser Gly Tyr Pro Gly Pro Gln Val Ser Tyr Pro Pro
112 35 40 45
114 Pro Pro Ala Gly His Ser Gly Pro Gly Pro Ala Gly Phe Pro Val Pro
115 50 55 60
117 Asn Gln Pro Val Tyr Asn Gln Pro Val Tyr Asn Gln Pro Val Gly Ala
118 65 70 75 80
120 Ala Gly Val Pro Trp Met Pro Ala Pro Gln Pro Pro Leu Asn Cys Pro
121 85 90 95
123 Pro Gly Leu Glu Tyr Leu Ser Gln Ile Asp Gln Ile Leu Ile His Gln
124 100 105 110
126 Gln Ile Glu Leu Leu Glu Val Leu Thr Gly Phe Glu Thr Asn Asn Lys
127 115 120 125
129 Tyr Glu Ile Lys Asn Ser Phe Gly Gln Arg Val Tyr Phe Ala Ala Glu
130 130 135 140
132 Asp Thr Asp Cys Cys Thr Arg Asn Cys Cys Gly Pro Ser Arg Pro Phe
133 145 150 155 160
135 Thr Leu Arg Ile Ile Asp Asn Met Gly Gln Glu Val Ile Thr Leu Glu
136 165 170 175
138 Arg Pro Leu Arg Cys Ser Ser Cys Cys Cys Pro Cys Cys Leu Gln Glu
139 180 185 190
141 Ile Glu Ile Gln Ala Pro Pro Gly Val Pro Ile Gly Tyr Val Ile Gln
142 195 200 205
144 Thr Trp His Pro Cys Leu Pro Lys Phe Thr Ile Gln Asn Glu Lys Arg
145 210 215 220
147 Glu Asp Val Leu Lys Ile Ser Gly Pro Cys Val Val Cys Ser Cys Cys
148 225 230 235 240
150 Gly Asp Val Asp Phe Glu Ile Lys Ser Leu Asp Glu Gln Cys Val Val
151 245 250 255
153 Gly Lys Ile Ser Lys His Trp Thr Gly Ile Leu Arg Glu Ala Phe Thr
154 260 265 270
156 Asp Ala Asp Asn Phe Gly Ile Gln Phe Pro Leu Asp Leu Asp Val Lys
157 275 280 285
159 Met Lys Ala Val Met Ile Gly Ala Cys Phe Leu Ile Asp Phe Met Phe
160 290 295 300
162 Phe Glu Ser Thr Gly Ser Gln Glu Gln Lys Ser Gly Val Trp

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Input Set : A:\SCRIPT220-1.ST25.txt

Output Set: N:\CRF3\08162001\I823847.raw

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163 305                               310                               315
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166 <211> LENGTH: 1265
167 <212> TYPE: DNA
168 <213> ORGANISM: Homo sapiens
170 <400> SEQUENCE: 3
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173 aagtgaatgt gaaaccacag atatttcatt aaaacatata tgaagataaa aacataacct      120
175 aagcttcaca gatataggac ttctgagctg agaggacctc ccggacatat tgtctacctt      180
177 aagcaccagg ctggacacac tgggaaacag gctgaccacc tgggctccca ggccttctac      240
179 ccaggacgtc agcatgacta cctagtccca cctgctggca cagctggcat tcctgttcaa      300
181 aatcagccag gtagacctga aggggtacca tggatgccag caccaccacc accattaaac      360
183 tgtccgccag gattggaata cttaagtcag atagatatga tactaattca tcagcaaatt      420
185 gaacttctgg aagtctctatt cagttttgaa agtagtaaca tgtatgaaat caagaacagc      480
187 tttgggcaga ggattttattt tgcagcagaa gatactaatt tctgtatccg aaattgctgt      540
189 gggcggtcta gaccttttac cttgaggatt actgataatg tgggtcgaga agtcataact      600
191 ctggaaagac cactaagatg taactgttgt tgttgccctt gctgccttca ggagatagaa      660
193 atccaagctc ctccctggtgt accagtaggt tatgttactc agacctggca cccatgtcta      720
195 acaaagttta caattaaaaa tcagaaaaga gaggatgtac taaaaattag tgggtccatgt      780
197 atcgtgtgca gctgtattgc ggggtgtgat tttgagatta catctcttga tgaacaaatt      840
199 gtggttgcca ggatttctaa gcactggtct gggtttttaa gagaggcatt tactgatgct      900
201 gacaactttg gaatccaatt ccctagagac cttgatgtta aaatgaaagc cgtgatgatt      960
203 ggtgcctggt tcctcattga ctacatgttt tttgaaagaa ctaggtaatg actggaatgt     1020
205 cagagtgtgg gagtgattaa atgattccgg atctttggct aggcaaaatg aaactataac     1080
207 tgatctaaac ggttccttcc ttcttctact gtgcaaggaa gatgtaagga aaaactcgca     1140
209 cactatctgt ggaactcatt taaattcaaa tcctagataa acatttcgca ttgaatattt     1200
211 acatggagaa aaatcatcaa acatcaacaa ttatcaagtt aattaataaa aatactaggt     1260
213 attgc                                         1265
216 <210> SEQ ID NO: 4
217 <211> LENGTH: 224
218 <212> TYPE: PRT
219 <213> ORGANISM: Homo sapiens
221 <400> SEQUENCE: 4
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224 1                               5                               10                               15
226 Leu Ser Gln Ile Asp Met Ile Leu Ile His Gln Gln Ile Glu Leu Leu
227                               20                               25                               30
229 Glu Val Leu Phe Ser Phe Glu Ser Ser Asn Met Tyr Glu Ile Lys Asn
230                               35                               40                               45
232 Ser Phe Gly Gln Arg Ile Tyr Phe Ala Ala Glu Asp Thr Asn Phe Cys
233                               50                               55                               60
235 Ile Arg Asn Cys Cys Gly Arg Ser Arg Pro Phe Thr Leu Arg Ile Thr
236 65                               70                               75                               80
238 Asp Asn Val Gly Arg Glu Val Ile Thr Leu Glu Arg Pro Leu Arg Cys
239                               85                               90                               95
241 Asn Cys Cys Cys Cys Pro Cys Cys Leu Gln Glu Ile Glu Ile Gln Ala
242                               100                              105                              110
244 Pro Pro Gly Val Pro Val Gly Tyr Val Thr Gln Thr Trp His Pro Cys
245                               115                              120                              125

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247 Leu Thr Lys Phe Thr Ile Lys Asn Gln Lys Arg Glu Asp Val Leu Lys
248      130                      135                      140
250 Ile Ser Gly Pro Cys Ile Val Cys Ser Cys Ile Ala Gly Val Asp Phe
251 145                      150                      155                      160
253 Glu Ile Thr Ser Leu Asp Glu Gln Ile Val Val Gly Arg Ile Ser Lys
254                      165                      170                      175
256 His Trp Ser Gly Phe Leu Arg Glu Ala Phe Thr Asp Ala Asp Asn Phe
257                      180                      185                      190
259 Gly Ile Gln Phe Pro Arg Asp Leu Asp Val Lys Met Lys Ala Val Met
260                      195                      200                      205
262 Ile Gly Ala Cys Phe Leu Ile Asp Tyr Met Phe Phe Glu Arg Thr Arg
263      210                      215                      220
265 <210> SEQ ID NO: 5
266 <211> LENGTH: 1680
267 <212> TYPE: DNA
268 <213> ORGANISM: Homo sapiens
270 <400> SEQUENCE: 5
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273 gtgctaggca cccgggctct tctgggggct ccagaactaa gccaccaga caccatcatc      120
275 tcgaaaaccc cagcccttct cccatggcag gctacttgcc ccccaaaggc tacgccctt      180
277 cgccccacc tccctaccct gtcaccctg ggtaccggga gccggcgcta catcctgggc      240
279 ccgggcaggc gccagtgcc gccaggtac ctgcccagc tcccggcttc gccctcttc      300
281 cctgcctgg ccccgtaggc ttggggctg ctgcccctt cttgccactg ccaggggtgc      360
283 cttctggcct cgaattcctg gtgcagattg atcagatttt gattcaccag aaggctgagc      420
285 gagtggaaac gttcctaggc tgggagacct gtaatcggtg tgaactgcgc tctggggccg      480
287 ggcagccctt ggtcaggcg gccgaggaga gcaactgctg cgcccgctct tgctgtggcg      540
289 cccgccggcc gctgcgtgtc cgctggccg accccgggga ccgtgaggtg ctgcgtttgc      600
291 tccgccgct gcactgtggc tgcagctgct gcccctgtgg cctccaggag atggaagtac      660
293 aggtccacc aggcaccacc attggccacg tgctacagac ctggcatccc ttctcccca      720
295 agttctccat ccaggatgcc gatcgccaga cagtcttgcg agtggtgggg cctgctgga      780
297 cctgtggctg tggcacagac accaactttg aggtgaagac tcgggatgaa tcccgcagt      840
299 tgggccgcat cagcaagcag tgggggggccc tggcccgaga agccctcaca gatgcagatg      900
301 actttggcct acagttcccg ctggacctgg atgtgagggg gaaggctgtg ctgctgggag      960
303 ccacattcct cattgactac atgttctttg agaagcgagg aggcgctggg ccctctgcca      1020
305 tcaccagtta gaggccacca tgggtgtgagg agaccatcac ctcgaccaga actccagatg      1080
307 gtcacctgcc ctggcccctc ctctgggcag cccctttcct ccatgtacac tgcaggggac      1140
309 agaagggggg ccccatccct accctactcc ctggccgcct gccctgtgg ttcccaagga      1200
311 ggggtatgta tgagagccgc tctctgtcta cctcccacca ctgtcccagc agtccctcgg      1260
313 cacacaggca tatcagcttt cacactttcc ccatgcactc tctcccaccc cttccaggg      1320
315 cctctgctcc aaaggaggcc tctggaaccc aggactctgg ggttttataa gagggctggg      1380
317 gtgtggaagg gcaagctgca ccaaagacgg tggatatagc caccgcccc ccgcgctgc      1440
319 ctagcatctg cttggccaat tagttcagcc tcagaccatg gcactttgag ggggtctcta      1500
321 cctcccatac aacagctgca gggggacccc agtgccaact tcctctccca ctagggccct      1560
323 gccttcagct ggtgcttget gcgattcctg tgcttatgt aactgccctt cttcccttg      1620
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328 <210> SEQ ID NO: 6
329 <211> LENGTH: 295
330 <212> TYPE: PRT
331 <213> ORGANISM: Homo sapiens

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333 <400> SEQUENCE: 6
335 Met Ala Gly Tyr Leu Pro Pro Lys Gly Tyr Ala Pro Ser Pro Pro Pro
336 1 5 10 15
338 Pro Tyr Pro Val Thr Pro Gly Tyr Pro Glu Pro Ala Leu His Pro Gly
339 20 25 30
341 Pro Gly Gln Ala Pro Val Pro Ala Gln Val Pro Ala Pro Ala Pro Gly
342 35 40 45
344 Phe Ala Leu Phe Pro Ser Pro Gly Pro Val Ala Leu Gly Ser Ala Ala
345 50 55 60
347 Pro Phe Leu Pro Leu Pro Gly Val Pro Ser Gly Leu Glu Phe Leu Val
348 65 70 75 80
350 Gln Ile Asp Gln Ile Leu Ile His Gln Lys Ala Glu Arg Val Glu Thr
351 85 90 95
353 Phe Leu Gly Trp Glu Thr Cys Asn Arg Tyr Glu Leu Arg Ser Gly Ala
354 100 105 110
356 Gly Gln Pro Leu Gly Gln Ala Ala Glu Glu Ser Asn Cys Cys Ala Arg
357 115 120 125
359 Leu Cys Cys Gly Ala Arg Arg Pro Leu Arg Val Arg Leu Ala Asp Pro
360 130 135 140
362 Gly Asp Arg Glu Val Leu Arg Leu Leu Arg Pro Leu His Cys Gly Cys
363 145 150 155 160
365 Ser Cys Cys Pro Cys Gly Leu Gln Glu Met Glu Val Gln Ala Pro Pro
366 165 170 175
368 Gly Thr Thr Ile Gly His Val Leu Gln Thr Trp His Pro Phe Leu Pro
369 180 185 190
371 Lys Phe Ser Ile Gln Asp Ala Asp Arg Gln Thr Val Leu Arg Val Val
372 195 200 205
374 Gly Pro Cys Trp Thr Cys Gly Cys Gly Thr Asp Thr Asn Phe Glu Val
375 210 215 220
377 Lys Thr Arg Asp Glu Ser Arg Ser Val Gly Arg Ile Ser Lys Gln Trp
378 225 230 235 240
380 Gly Gly Leu Val Arg Glu Ala Leu Thr Asp Ala Asp Asp Phe Gly Leu
381 245 250 255
383 Gln Phe Pro Leu Asp Leu Asp Val Arg Val Lys Ala Val Leu Leu Gly
384 260 265 270
386 Ala Thr Phe Leu Ile Asp Tyr Met Phe Phe Glu Lys Arg Gly Gly Ala
387 275 280 285
389 Gly Pro Ser Ala Ile Thr Ser
390 290 295

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392 &lt;210&gt; SEQ ID NO: 7

393 &lt;211&gt; LENGTH: 3206

394 &lt;212&gt; TYPE: DNA

395 &lt;213&gt; ORGANISM: Homo sapiens

397 &lt;400&gt; SEQUENCE: 7

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400 tctgccagta caactagacc cggcgctctg cgtccccggt gccagcatt ctgcggggca 120
402 ggcggattaa ttggaattct tcaaaatgtc aggtgtggtc ccacagccc ctgaacagcc 180
404 tgcagggtgaa atggaaaatc aaacaaaacc accagatcca aggcctgatg ctctctctga 240
406 atacagttct catttttttac caggaccccc tggaacagct gtcctccac ctactggcta 300

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Use of n and / or Xaa has been detected in the  
Sequence Listing. Review the Sequence Listing  
to ensure a corresponding explanation is present  
in the <220> to <223> fields of each sequence  
using n or Xaa.

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/823,847

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Input Set : A:\SCRIP1220-1.ST25.txt

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L:1002 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15

L:1030 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15

L:1032 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15